REMARKS

The Office Action dated January 2, 2003 has been reviewed. Applicant respectfully thanks the Examiner for indicating that claims 3, 4 and 14 contain allowable subject matter. Applicant has rewritten claims 3, 4 and 14 in independent form. Claims 1, 6 and 9 have been amended. New claim 19 has been added. Claims 1-19 are pending and are respectfully submitted for reconsideration by the Examiner.

Claims 1- 12 were rejected under 35 U.S.C. § 112, second paragraph. Claims 1, 6 and 9 have been amended to address the Examiner's concerns, however it is respectfully submitted that the amendments in no way narrow the scope of the claims. Support for these features may be found at, for example, FIG. 1 of Applicant's specification as originally filed. Withdrawal of the rejection under 35 U.S.C. § 112, second paragraph, of claims 1-12 is respectfully requested.

Claims 1, 2 and 5-9 were rejected under 35 U.S.C. § 102(b) as being anticipated by de Versterre et al. (U.S. Patent No. 4,399,836).

To the extent the Examiner considers the rejection under 35 U.S.C. § 102 to apply to the amended claims, the rejection is traversed.

Amended claim 1 recites a combination of features including "at least two actuators coupled to a respective one of the at least two closure members." The Office Action relies upon actuator modules 10 of de Versterre et al. for allegedly showing these claimed features. However, de Versterre et al. does not show Applicant's combination of features including "at least two actuators coupled to a respective one of the at least two closure members" recited in claim 1. As discussed at col. 1, ll. 55-58, it is a specific object of de Versterre et al. to provide an actuator module that is detachably related to a valve-body module that contains the valve member. As discussed at col. 2, ll. 3-8, de Versterre et al. alleges to provide a unitary valve-

positioning actuator module having a mounting face adapted for removable assembly in register to the mounting face of a valve-body module having a valve stem exposed. Accordingly, as shown in FIG. 2, and discussed at col. 3, ll. 41-45, the reduced upper end of the stem 31 of the valve member 32 projects upward, above the plane of surface 18, for coaction with module 10. As shown in FIG. 4, and discussed at col. 4, ll. 33-44, actuator module 10 is fully self-contained within housing 50, and includes bore 52 to accommodate electromagnetic drive components having registered abutment at 55 with the projecting end 31 of the valve stem when modules 10-11 are assembled. Applicant respectfully submits that not only does de Versterre et al. fail to teach "at least two actuators coupled to a respective one of the at least two closure members" as recited in claim 1, but de Versterre et al. teaches away from these claimed features by showing drive components having registered abutment at 55 with the projecting end 31 of the valve stem to achieve the specific objective of providing an actuator module that is detachably related to a valve-body module that contains the valve member.

At least for the above-described reasons, Applicant respectfully requests that the rejection under 35 U.S.C. § 102 of claim 1 withdrawn. Claims 2 and 5-9 ultimately depend from claim 1, and therefore recite the same combination of allowable features recited in claim 1, as well as additional features that further distinguish over the applied art.

Claims 10-12 were rejected under 35 U.S.C. § 103 as being unpatentable over de Versterre et al. Applicant respectfully traverses the rejection. Claims 10-12 ultimately depend from claim 1, and therefore recite the same combination of allowable features recited in claim 1, as well as additional features that further distinguish over the applied art. As described above with respect to claim 1, de Versterre et al. teaches away from the invention of claim 1. At least

for the above-described reasons, Applicant respectfully requests that the rejection under 35 U.S.C. § 103, of claims 10-12, be withdrawn.

Claims 13, 15, 16 and 18 were rejected under 35 U.S.C. § 102(b) as being anticipated by de Versterre et al. Claim 17 was rejected under 35 U.S.C. § 103 as being unpatentable over de Versterre et al. These rejections are traversed as well. Claim 13 recites "[a] method of distributing metered airflow from an inlet to a plurality of channels in a fuel cell . . ." The invention of deVersterre et al. shows an array of valves to distribute the flow of liquids from a coolant supply manifold used, for example in the production of high quality metal sheet. (Col. 1, ll. 9-28). Applicant submits that deVersterre et al. does not teach or suggest anywhere "[a] method of distributing metered airflow from an inlet to a plurality of channels in a fuel cell . . ." Accordingly, Applicant requests that the rejection under 35 U.S.C. § 102(b), of claim 13, and claims 15, 16 and 18 dependent therefrom, and the rejection under 35 U.S.C. § 103, of claim 17, also dependent from claim 13, be withdrawn.

Attached hereto is a marked-up version of the changes made by the current amendment. The attached page is captioned "**Version with markings to show changes made**."

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claims 1, 3, 4, 6, 9 and 14 have been amended as follows:

1. (Amended) An air mass flow controller valve for fuel cells, the flow controller valve comprising:

an inlet disposed along a first axis;

at least two channels in communication with the inlet, the at least two channels disposed along a second axis;

at least one air mass sensor disposed proximate one of the at least two channels;

a seat portion disposed ~~[between]~~ **in** one channel of the at least two channels;

at least two closure members, one of the at least two closure members disposed proximate one channel of the at least two channels, the other of the at least two closure member disposed proximate the other channel of the at least two channels, each closure member movable to a plurality of positions, a first position permitting air flow ~~[between]~~ **in** each channel ~~[to]~~ **from** the inlet and a second position preventing communication ~~[between]~~ **in** one channel of the at least two channels and the inlet; and

at least two actuators coupled to a respective one of the at least two closure members, the at least two actuators responsive to one of the air mass sensors in each channel of the at least two channels to move a respective one of the at least two closure members between the first position and the second position.

3. (Amended) **An air mass flow controller valve for fuel cells, the flow controller valve comprising:**

an inlet disposed along a first axis;

at least two channels in communication with the inlet, the at least two channels disposed along a second axis;

at least one air mass sensor disposed proximate one of the at least two channels;

a seat portion disposed in one channel of the at least two channels;

at least two closure members, one of the at least two closure members disposed proximate one channel of the at least two channels, the other of the at least two closure member disposed proximate the other channel of the at least two channels, each closure member movable to a plurality of positions, a first position permitting air flow in each channel from the inlet and a second position preventing communication in one channel of the at least two channels and the inlet; and

at least two actuators coupled to a respective one of the at least two closure members, the at least two actuators responsive to one of the air mass sensors in each channel of the at least two channels to move a respective one of the at least two closure members between the first position and the second position ~~[The valve of claim 1]~~,

wherein the inlet further comprises a portion having a first cross sectional area and a second cross sectional area proximate the at least two channels, the second cross sectional area being greater than the first cross-sectional area.

4. (Amended) **An air mass flow controller valve for fuel cells, the flow controller valve comprising:**

an inlet disposed along a first axis;

at least two channels in communication with the inlet, the at least two channels disposed along a second axis;

at least one air mass sensor disposed proximate one of the at least two channels;

a seat portion disposed in one channel of the at least two channels;

at least two closure members, one of the at least two closure members disposed proximate one channel of the at least two channels, the other of the at least two closure member disposed proximate the other channel of the at least two channels, each closure member movable to a plurality of positions, a first position permitting air flow in each channel from the inlet and a second position preventing communication in one channel of the at least two channels and the inlet; and

at least two actuators coupled to a respective one of the at least two closure members, the at least two actuators responsive to one of the air mass sensors in each channel of the at least two channels to move a respective one of the at least two closure members between the first position and the second position ~~[The valve of claim 1]~~,

wherein the at least one airmass sensor comprises a pressure sensor disposed in the inlet and a position sensor that senses the position of the actuator.

6. (Amended) The valve of claim 1, wherein each of the at least two channels further comprises an inlet portion disposed along the ~~[first]~~ **second** axis and an outlet portion disposed along a fourth axis spaced from the ~~[first]~~ **second** axis by a distance, the distance between the ~~[first]~~ **second** axis and the fourth axis defining the seat portion.

9. (Amended) The valve of claim 6, wherein the at least two actuators further comprise a

housing for each actuator, the housing having a first wall and a second wall disposed along the third axis, a third wall disposed along the ~~[first]~~ **second** axis and a fourth wall disposed along the fourth axis, the first and third walls formed as part of the inlet portion, the second and fourth walls formed as part of the outlet portion.

14. (Amended) **A method of distributing metered airflow from an inlet to a plurality of channels in a fuel cell, each channel of the plurality of channels provided with an air mass flow sensor that provides a signal indicating measured air amount flowing in each channel of the plurality of channels, a plurality of closure members, each closure member being contiguous to a seat portion and disposed in a respective channel of the plurality of channels, each closure member being movable by an actuator between a first position to permit flow and a second position to prevent flow, the method comprising:**

flowing air to the inlet;

determining an air mass amount in each channel of the plurality of channels; and

metering the air mass amount provided to each channel from the inlet as a function of a desired air amount and the air mass amount determined in each channel ~~[The method of claim 13]~~,

wherein the flowing air further comprises flowing air in a passage with a first portion and a second portion, first portion having a first cross section area and the second portion with a second cross sectional area, the second cross sectional area being greater than the first cross sectional area.

New claim 19 has been added.